

## ETF Spotlight

Invest in the digital era with  
crypto asset ETFs



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## Hong Kong's ETF market in 2022

Welcome to this fourth edition of our biannual HKEX ETF Spotlight. In the following pages, we will take an in-depth look at the major milestones and driving trends for Hong Kong's ETF market in 2022 and focus in on the fast-emerging world of crypto asset ETFs.

## Major milestones

The Hong Kong Exchange Traded Fund (ETF) market proved resilient despite challenging economic conditions in 2022. Average daily turnover (ADT) of Hong Kong-listed ETFs reached HK\$12 billion in 2022, an increase of more than 50% compared with 2021 and HKEX made many listing "firsts" that further enhanced the diversity of the ETF ecosystem.

**HK\$384 billion<sup>1</sup>**  
market capitalisation

**HK\$12 billion<sup>2</sup>**  
average daily turnover

**HK\$46 billion<sup>3</sup>**  
fund flow

## New listings

In 2022 we welcomed 29 new ETF listings raising a total of HK\$2.8 billion<sup>4</sup>, including the first metaverse ETF, the first carbon futures ETF, the first blockchain ETF, and the first crypto asset ETF.

### A continuously diversifying product ecosystem



Apart from new product offerings, HKEX also welcomed two additions to the long list of reputable issuers in the market – Phillip Capital Management (HK) Limited and Pando Finance Limited. Phillip Capital Management (HK) Limited listed the first IPO ETF in Hong Kong – Phillip HK Newly Listed Equities Index ETF (2835) – while Pando listed two active ETFs during the year – Pando Innovation ETF (3056) and Pando Blockchain ETF (3112).

<sup>1</sup> Source: HKEX, as of 31 December 2022

<sup>2</sup> Source: HKEX, from 1 January 2022 to 31 December 2022

<sup>3</sup> Source: ETFGI, as of 31 December 2022

<sup>4</sup> Source: HKEX, as of 31 December 2022

## Market liquidity

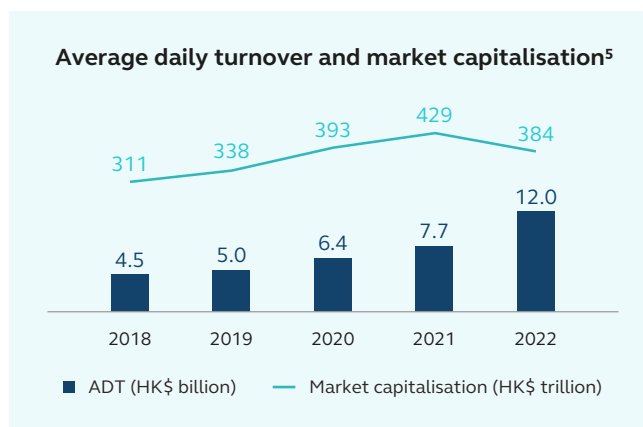
ADT of Hong Kong-listed ETFs grew to HK\$12 billion in 2022 from HK\$7.7 billion in 2021, a year-on-year (y-o-y) increase of 55%.

Amid high volatility, ETP turnover peaked at HK\$38.1 billion on 16 March 2022, with HK\$6.9 billion contributed by Leveraged and Inverse Products (L&I Products).

On the same day, Tracker Fund of Hong Kong (2800) and CSOP Hang Seng TECH Index Daily (-2x) Inverse Product (7552) both broke their daily turnover records, registering HK\$19.0 billion and HK\$2.3 billion, respectively.

ETFs benchmarked against the HSTECH Index gained popularity with four of the top 10 ETFs by turnover in 2022 tracking the HSTECH Index.

By product category, trading volume for thematic ETFs built on 2021 momentum and reached HK\$1.6 billion in 2022, up 102% y-o-y. ADT for L&I Products rose to HK\$2.1 billion in 2022, up 74% y-o-y, as trading activity surged amid market volatility. China fixed income ETFs saw significant uptake from investors and ADT reached HK\$8.9 million, up 77% y-o-y.

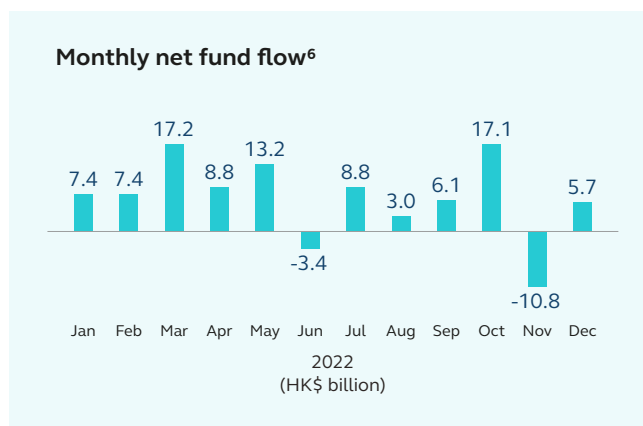
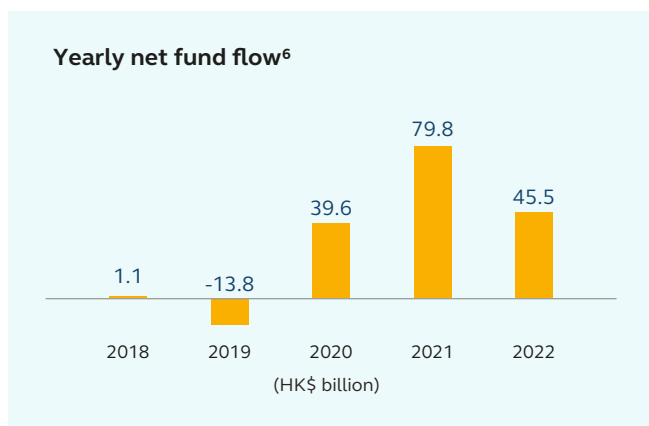


### Four of the top 10 ETFs by turnover in 2022 tracking the HSTECH Index

Stock code	Product name	2022 ADT (HK\$ million)
3033	CSOP Hang Seng TECH Index ETF	1,375.43
7552	CSOP Hang Seng TECH Index Daily (-2X) Inverse Product	592.38
7226	CSOP Hang Seng TECH Index Daily (2X) Leveraged Product	577.77
3067   9067	iShares Hang Seng TECH ETF	164.32

Market capitalisation ended the year at HK\$384 billion, a decrease of 11% from the record high of HK\$429 billion at the end of 2021. Market capitalisation dropped because the Hang Seng Index ETF (2833) was delisted in September 2022 following a change in the investment manager for the Tracker Fund of Hong Kong (2800).

Despite the delisting in September, the Hong Kong ETF market still registered a net inflow of HK\$45.5 billion in 2022 with the most inflows in March and October. November saw the most significant outflow during the year as investors took profit after the stock market rebounded from a record low in October.



<sup>5</sup> Source: HKEX, from 2018 to 2022

<sup>6</sup> Source: ETFGI, as of 31 December 2022



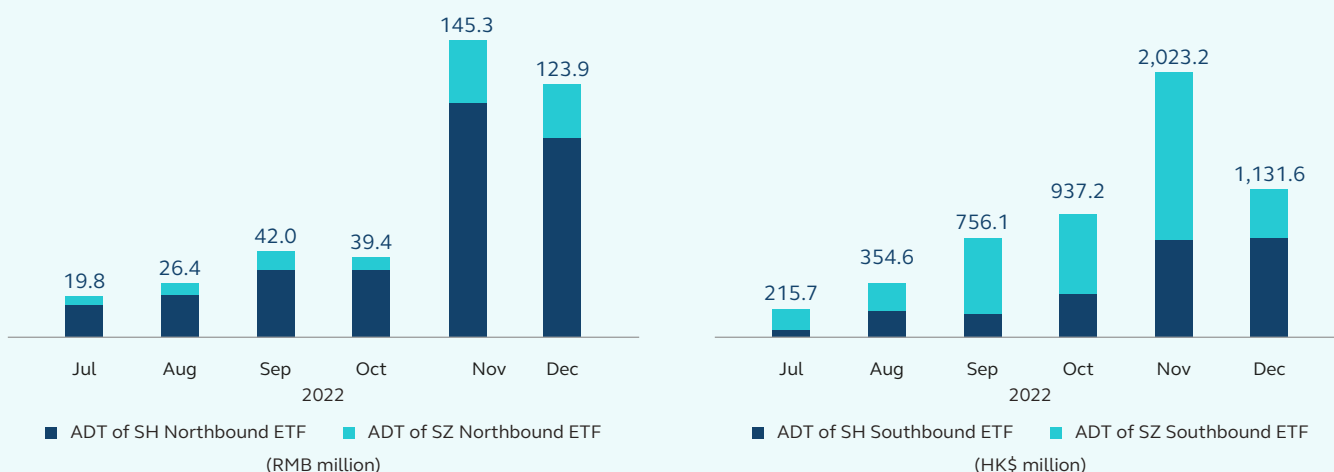
## Market structure enhancements

With expanding product diversity, increasing investor awareness and ground-breaking new initiatives, such as the inclusion of ETFs in Stock Connect on 4 July 2022, ETFs have become one of the fastest-growing segments in HKEX’s markets.

The inclusion of ETFs in Stock Connect marked the latest milestone in HKEX’s Mainland-Hong Kong mutual market access scheme, allowing ETF issuers from both sides to access liquidity across the border.

In the six months since its launch, the ADT of eligible ETFs traded through Northbound and Southbound Stock Connect reached RMB66.7 million and HK\$908.1 million respectively.<sup>7</sup> There are currently 97 eligible Northbound ETFs and 5 eligible Southbound ETFs.

### Average daily turnover of ETFs on Stock Connect<sup>7</sup>



To further enhance market quality, the scope of applicable securities in HKEX’s Volatility Control Mechanism (VCM) has expanded to include ETFs, effective from 3 May 2022. ETFs with ADT of at least HK\$100 million (or equivalent) for the past three months and listed on HKEX for at least three months are included as VCM securities. VCM can help to protect investors from extreme price volatility and provides the market with a temporary cooling-off period for investors to reassess their strategies and positions. 12 ETFs were categorised as VCM securities by the end of 2022.

Lastly, since 1 January 2023, the trading tariff of HK\$0.50 payable on each cash market transaction – including ETF transactions – at HKEX has been removed, while the ad valorem fee on all trades has been adjusted from 0.005% to 0.00565%. The enhancement has essentially simplified Hong Kong’s cash market trading fee structure and lowered the effective trading fee rate (trading tariff and trading fee in percentage terms) from a historical average of approximately 0.00576% to 0.00565%.<sup>8</sup>

<sup>7</sup> Source: HKEX, from 4 July 2022 to 31 December 2022

<sup>8</sup> Based on trading statistics from 2014 to 2021





# Crypto asset ETFs: A breakthrough for Hong Kong's ETF market

Asia’s first crypto asset ETFs have debuted in Hong Kong! Since the Securities and Futures Commission (SFC) greenlighted the authorisation of virtual asset futures ETFs for public offering on 31 October 2022, HKEX has welcomed the listing of three crypto asset ETFs as of 31 January 2023, representing ADT of HK\$8.28 million.

This is set to open up new opportunities in crypto assets for investors. But how much do you know about this emerging asset class?

World’s  
**1st** Ether futures ETF  
CSOP Ether Futures ETF, listed on 16 Dec 2022

Asia’s  
**1st** Bitcoin futures ETF  
CSOP Bitcoin Futures ETF, listed on 16 Dec 2022

## Crypto assets at a glance

When you hear about crypto assets (sometimes referred to as ‘virtual assets’), the first thing that comes to mind might be cryptocurrency. However, crypto assets include a wider subset of digital assets that utilise cryptography and distributed ledger technology to perform different functions, such as serving as a medium of exchange and as a means to store value. Some crypto assets include:

- **Cryptocurrency** – a digital currency that uses (1) cryptography to prevent counterfeiting and fraudulent transactions, and (2) a decentralised system to record transactions and issue new units
- **Stablecoins** – tokens that aim to maintain a stable value relative to a specified asset, or a pool or basket of assets. Their value is tied to another asset – usually fiat currencies such as the US dollar
- **Utility tokens** – tokens that are typically issued by products or services providers to promise future access to a specific product or service. For example, Binance Coin (BNB), a cryptocurrency issued by the Binance crypto exchange, is used by millions of users to pay transaction fees on Binance’s trading platform
- **Non-fungible tokens (NFTs)** – a unique digital identifier that is recorded in a blockchain and is used to certify ownership of a specific digital asset, such as a song or a digital image

### Total cryptocurrency market capitalisation, Jan 2019-Dec 2022<sup>9</sup>

(US\$ trillion)



<sup>9</sup> Source: Coin Market Cap <https://coinmarketcap.com/charts/>





## DLT – The backbone of crypto assets

Crypto assets are underpinned by distributed ledger technology (DLT), which refers to the protocols and infrastructure that allow computers (also called nodes) across a network to validate transactions and update records at the same time. Since each network participant (or node) holds a copy of the exact same data record, DLT does not require a central authority to maintain data consistency across the network, as is necessary in traditional centralised ledgers.



**Centralised system**  
Each component is connected to one central component

VS.



**Distributed system**  
Components are connected with one another directly or indirectly without having a central element

In addition to decentralisation, another major advantage of DLT is reliability. Unlike centralised ledgers, a distributed ledger does not have a single point of failure as each node has their own copy of an identical record, providing resilience to data loss.

DLT also creates an immutable history of transactions, meaning that once a transaction has been confirmed and entered, its record can never be altered. However, distributed ledger systems may require a significant amount of computing power to verify transactions across its network, which could lead to high energy consumption.

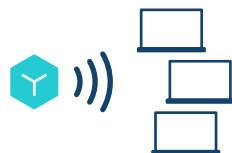
### Blockchain in brief

Blockchain is a particular type of DLT. A block is a file that stores information such as a list of transactions. Blocks are created when new transactions in the network are verified, and the newly created blocks are appended to their previous blocks in chronological order to form an immutable “chain”. Once a block of information is created, it is sent to all the nodes in a network. This makes the blockchain almost impossible to be tampered with.

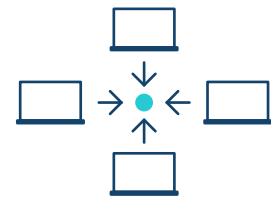
### The blockchain process



1. Someone registers a transaction



2. The transaction is sent to all nodes (i.e. participants) in the network



3. Nodes validate the transaction\*



4. Once verified, the transaction is combined with other transactions to create a new block of data for the ledger



5. The new block is then added to the existing blockchain permanently



6. The transaction is completed

\*Transaction validation requires network participants to solve complex mathematical problems, a process also known as ‘mining’. The huge computing effort required in mining can make the blockchain less vulnerable to tampering. Miners are usually rewarded for their effort in cryptocurrency.

## The crypto market

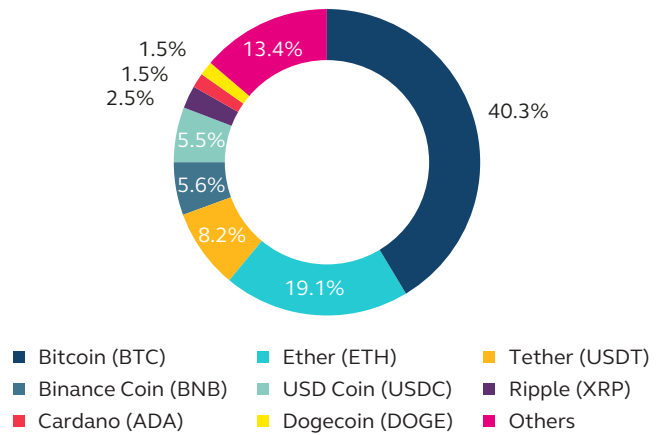
Blockchain technology was first successfully used in bitcoin, the first and highest value digital currency launched in 2009. By November 2022, there were nearly 10,000 active cryptocurrencies across different blockchains.

### Bitcoin – the dominant player in the crypto market

Bitcoin has remained the dominant cryptocurrency since its inception. It has emerged as a powerful tool for disintermediation in payment as it is sent peer-to-peer without the need for third-party intermediaries, such as a bank.

Bitcoins now account for around 40% of crypto market capitalisation,<sup>10</sup> although newer coins such as ether, the native currency for the Ethereum blockchain, have started to appear and dented its market share.

Cryptocurrency market share, 2022<sup>10</sup>



### Ethereum – the new favourite in decentralised applications

While bitcoins were developed as a digital currency for buying and selling goods and services, the primary purpose of Ethereum is to support smart contracts and decentralised applications (dApps). According to Ethereum:

- Smart contracts digitise agreements by turning the terms of an agreement into computer codes that automatically execute when the contract terms are met. This can prevent the main problem with traditional contracts where a contracted party may not follow through with the contract's terms.
- dApps have their backend code running on a decentralised peer-to-peer network. This contrasts with standard web apps whose backend codes run on a centralised server, operated and owned by a single organisation.

### What influences the value of digital currencies?

As bitcoin and ether are built for different purposes, their values can be influenced by different factors. While bitcoin's value is dictated by its perceived scarcity, with the maximum total supply of bitcoin capped at 21 million coins, there are no upper limits to the available supply of ether. The latter is to a larger extent influenced by the demand for tokens on different dApps. For example, OpenSea, the world's largest digital marketplace for crypto collectibles and NFTs, is a popular dApp built on the Ethereum blockchain. This makes ether the dominant digital currency in NFT transactions.

The performance of bitcoin and ether since 2020<sup>11</sup>



<sup>10</sup> Source: Statista, data as of 15 November 2022: <http://www.statista.com/statistics/1269302/crypto-market-share/>

<sup>11</sup> Source: Bloomberg, as of 31 December 2022



## Crypto investment vehicles

Even after more than a decade of development, cryptocurrencies are still considered to be in their infancy. Proponents believe that the use of cryptocurrencies could potentially revolutionise payment systems, removing the need for a third party in transactions and enabling money transfers between people and businesses without any intermediation.

The potential to gain mainstream adoption is attractive to investors as well. A survey conducted by the crypto exchange Gemini found out that the vast majority of crypto owners (79%) buy and hold for its long-term investment potential. In regions where local currencies have experienced long-term devaluation, such as Brazil, India, Mexico and South Africa, respondents are more likely to consider cryptocurrencies as a way to guard against inflation.<sup>12</sup>

### Crypto investing may potentially offer:

- An early-stage investment opportunity
- Investment diversification in a new asset class
- Lower correlation to traditional assets than stocks
- Inflation hedging
- Short-term trading to profit from volatility



### Direct exposure vs. ETF vs. futures

Buying directly is perhaps the most common way to invest in cryptocurrencies. However, there are alternative channels and ETFs investing in crypto futures are one indirect channel through which investors may participate in the market.

Compared to direct investments in crypto assets that are generally unregulated and prone to large price swings, future-based ETFs are regulated and may be less volatile due to active management by ETF managers.

In addition, trading on crypto exchanges involves complicated procedures, such as account opening, and cashing out often involves a service charge. On the other hand, futures-based crypto asset ETFs can be traded through broker accounts, just like trading stocks.

An ETF can also help investors gain crypto exposure, minimising the risk of them misplacing their password or falling victim to crypto theft. Instead of holding a cold/hot wallet, investors in crypto asset futures ETFs can rely on asset managers and custodians to manage their underlying holdings.

In contrast to futures investments, which require account set-up and margin deposits, investors can spread their risk across a portfolio of crypto asset futures contracts with ETFs, potentially achieving diversification benefits and streamlining the investment process.

	Direct exposure	Crypto futures	Crypto futures ETFs
Pros	<ul style="list-style-type: none"> <li>• 24/7 trading</li> <li>• Buy and sell in different fiat currencies</li> <li>• Can be used for digital payments</li> </ul>	<ul style="list-style-type: none"> <li>• Regulated</li> <li>• Cost effective with leverage</li> </ul>	<ul style="list-style-type: none"> <li>• Regulated</li> <li>• Convenient – trade like stocks</li> <li>• Secure</li> <li>• Lower risk with diversified portfolio</li> </ul>
Cons	<ul style="list-style-type: none"> <li>• Higher concentration risk</li> <li>• Account set-up required</li> <li>• Cashing out often requires service charge</li> </ul>	<ul style="list-style-type: none"> <li>• Higher concentration risk</li> <li>• Account set-up required</li> <li>• Margin deposit required</li> </ul>	<ul style="list-style-type: none"> <li>• Trading only available when stock exchange is open</li> <li>• Limited choices due to regulation</li> </ul>

<sup>12</sup> Source: 2022 Global State of Crypto Report: <https://www.gemini.com/gemini-2022-state-of-crypto-global.pdf?msclkid=f120c3a5b52111ec9b2ade101f17d3b7>



## Hong Kong steps into the future with crypto asset ETFs

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Hong Kong has set its sights on becoming an international centre for crypto assets and on 31 October 2022 the SFC issued an announcement laying out requirements for ETFs that invest in virtual assets primarily through futures contracts.

In the initial phase, the eligible underlying of crypto asset futures ETFs include bitcoin and ether futures traded on the Chicago Mercantile Exchange.

In line with fund manager requirements, the management company of a crypto asset futures ETF should demonstrate at least three years' proven track record in managing ETFs. They are also expected to adopt an active investment strategy.

The launch of crypto futures ETFs in Hong Kong enables investors to trade crypto exposure during the Asian time zone, allowing them to respond to the news flow from the always-open crypto market. However, as crypto assets are a relatively new asset class and subject to price fluctuations, investors should understand the risk involved in crypto investing before making any investment decisions.

In addition to crypto futures ETFs, the Hong Kong ETF market has a range of products available for investors to gain exposure to disruptive technologies, such as blockchain and fintech. Learn more at [www.hkex.com.hk/etf](http://www.hkex.com.hk/etf).





## Product list

## Crypto asset (bitcoin and ether), blockchain and fintech ETFs

Stock code	Currency	Product name	Underlying index
3066	HKD	CSOP Bitcoin Futures ETF	-
3068	HKD	CSOP Ether Futures ETF	-
3112	HKD	Pando Blockchain ETF	-
3135	HKD	Samsung Bitcoin Futures Active ETF	-
3171	HKD	Samsung Blockchain Technologies ETF	-
3185	HKD	Global X Fintech ETF	Indxx Global Fintech Thematic Index (net total return)

For the full list of Hong Kong-listed ETFs, visit





## FAQs

## Trade Asia. In Asia.

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### What are the benefits of trading Hong Kong-listed ETFs?

There are a number of advantages to trading ETFs listed in Hong Kong, including the opportunity to diversify portfolios with exposure to a range of geographies and asset classes, including but not limited to, commodities, fixed income, sector-based, thematic (e.g. ESG, technology and digital asset) and smart beta funds.

In addition, Hong Kong-listed ETFs trade in the Asian time zone, enabling investors to trade Asian underlying within a much narrower band of premiums and discounts compared to US-listed ETFs. This means that they do not deviate from their fair values as much, making them an ideal choice for trading in the secondary market.

Further, investors opting for a Hong Kong-listed ETF benefit from the city's simple and low tax regime, where the tax rate on ETFs is up to 30% lower than that of their US-listed counterparts.<sup>13</sup>

These advantages have helped the market expand rapidly in recent years to 172 ETFs and HK\$384 billion in market capitalisation at the end of 2022<sup>14</sup> – up from 128 ETFs and HK\$338 billion in market capitalisation in 2019<sup>15</sup>.

### Can Hong Kong-listed ETFs be traded in USD?

Investors have the choice of trading in multiple currency counters, i.e. HKD, RMB or USD, after HKEX launched the first multiple trading counter ETFs in 2012.

The USD counter, which is available for specific products, removes the need for currency exchange, and offers investors the same level of flexibility and familiarity they enjoy trading US-listed ETFs while reducing FX costs and risks.

## The cost advantage

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### How has Hong Kong's ETF market been affected by the government's decision to raise stamp duty on stock transactions from 0.1% to 0.13%?

The stamp duty for trading ETFs in the secondary market in Hong Kong has been waived since 2015, which is still effective after increase in stamp duty on stock transactions. In other words, when trading Hong Kong-listed ETFs in the secondary market, investors do not incur stamp duty.

Additionally, in the primary market, since August 2020, ETF market makers have been enjoying zero stamp duty on stock transactions when they create and redeem ETF units in Hong Kong, resulting in lower creation and redemption costs for market makers.

As a whole, all stamp duty waivers reduce transaction costs for trading ETFs.

<sup>13</sup> Source: HKEX, ETF Tax Calculator, based on the index constituents data and the applicable tax rates as of 31 December 2022

<sup>14</sup> Source: HKEX, as of 31 December 2022

<sup>15</sup> Source: HKEX, as of 31 December 2019



## Inclusion of ETFs in Stock Connect

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### What does the inclusion of ETFs in Stock Connect mean for HKEX?

The inclusion of ETFs in Stock Connect is the latest milestone in HKEX's landmark mutual market access programme with Mainland exchanges. It broadens the Connect product ecosystem and opens up opportunities for investors. In addition, it helps support Mainland Chinese investors' diversification to offshore assets and strengthens our position as the global base for China-bound investments.

The expansion of Stock Connect to include ETFs also provides issuers with an additional channel to access Mainland Chinese investors, thus encouraging more active ETF issuance and trading in Hong Kong. This, in turn, will further expand HKEX's ETF product diversity and enhance liquidity.

### What are the benefits of the inclusion for Hong Kong and international investors?

Investors are now able to access new pools of established liquidity across the border, and capture new investment opportunities that are uniquely available in the Mainland China market.

### Why were ETFs included in 2022?

The inclusion of ETFs in Stock Connect followed a strong year for ETFs in Hong Kong and:

- Growing investor demand for A-share products;
- Increasing diversification needs among Mainland Chinese investors;
- Continuing RMB internationalisation; and
- Increasing use of ETFs as an investment tool by investors

We expect these factors to drive wider adoption of China-focused ETFs and broaden the investor base.

## Thematic ETFs on the rise

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### New listings of thematic ETFs contributed to the fast expansion of Hong Kong's ETF product range. What factors are driving market momentum?

Thematic ETFs continue to stay in the limelight as investors seek to capture megatrends through a diverse and convenient vehicle. In 2022, the Hong Kong ETF market saw waves of thematic ETF products coming to market, most of which invest in megatrend-related themes such as ESG, blockchain and innovative technologies (see "New Listings" section on P.4). In particular, two crypto asset ETFs listed in December last year – Asia's first bitcoin futures ETF and the World's first ether futures ETF – became the most actively traded new ETFs of 2022, with a combined ADT of HK\$13.4 million in the first two weeks after launch.

Newly listed thematic ETFs contributed HK\$9.3 million ADT to the Hong Kong ETF market in 2022. As demand for megatrend investing continues to rise, thematic ETFs are set to grow further in terms of the number of products and the diversity of coverage, allowing investors to capture the trends of tomorrow.

## Contact us

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For more information please visit [www.hkex.com.hk/etf](http://www.hkex.com.hk/etf) or contact [ETFs@hkex.com.hk](mailto:ETFs@hkex.com.hk)

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